



## MULTILAYER CERAMIC CHIP CAPACITORS

### **C Series Commercial Grade Soft Termination**

Type:

C1608 [EIA CC0603]  
C2012 [EIA CC0805]  
C3216 [EIA CC1206]  
C3225 [EIA CC1210]  
C4520 [EIA CC1808]  
C4532 [EIA CC1812]  
C5750 [EIA CC2220]  
C7563 [EIA CC3025]

Issue date:  
Jun 2015



## REMINDERS

Please read before using this product

### SAFETY REMINDERS



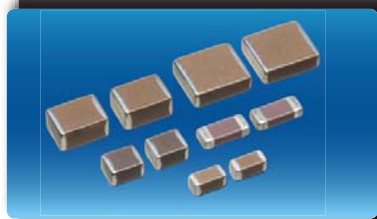
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Notice: Effective January 2013, TDK will use a new catalog number which adds product thickness and packaging specification detail. This new catalog number should be referenced on all catalog orders going forward, and is not applicable for OEM part number orders. Please be aware the last five digits of the catalog number will differ from the item description (internal control number) on the product label. Contact your local TDK Sales representative for more information.

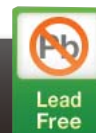
(Example)

| Catalog Issued date    | Catalog Number      | Item Description (On Delivery Label) |
|------------------------|---------------------|--------------------------------------|
| Prior to January 2013  | C1608C0G1E103J      | C1608C0G1E103JT000N                  |
| January 2013 and Later | C1608C0G1E103J080AA | C1608C0G1E103JT000N                  |



## C Series Soft Termination

Type: C1608 [EIA CC0603], C2012 [EIA CC0805], C3216 [EIA CC1206], C3225 [EIA CC1210], C4520 [EIA CC1808], C4532 [EIA CC1812], C5750 [EIA CC2220], C7563 [EIA CC3025]

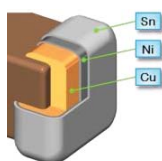


### Features

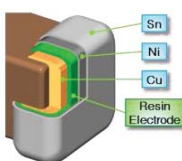


- Improved board bending resistance, drop impact resistance, thermal shock resistance, and heat cycle properties.
- Conductive resin absorb external stress to protect solder joint parts and capacitor body.
- Compliance with the RoHS Directive.

#### Standard Product



#### Soft Termination

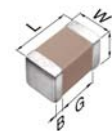


### Applications



- Switching power supply
- Telecom base station
- Electronic circuits mounted on alumina substrate
- SMT application which requires bending robustness in which solder joint reliability is problematic

### Shape & Dimensions



|   |                  |
|---|------------------|
| L | Body Length      |
| W | Body Width       |
| T | Body Height      |
| B | Terminal Width   |
| G | Terminal Spacing |



### Catalog Number Construction

C • 7563 • X7S • 1C • 107 • M • 280 • L • E

#### Series Name

#### Dimensions L x W (mm)

| Code  | Length            | Width             | Terminal  |
|-------|-------------------|-------------------|-----------|
| C1608 | 1.60 + 0.20/-0.10 | 0.80 + 0.15/-0.10 | 0.20 min. |
| C2012 | 2.00 + 0.45/-0.20 | 1.25 + 0.25/-0.20 | 0.20 min. |
| C3216 | 3.20 + 0.40/-0.20 | 1.60 + 0.30/-0.20 | 0.20 min. |
| C3225 | 3.20 + 0.50/-0.40 | 2.50 ± 0.30       | 0.20 min. |
| C4520 | 4.50 + 0.30/-0.20 | 2.00 ± 0.15       | 0.20 min. |
| C4532 | 4.50 + 0.50/-0.40 | 3.20 ± 0.40       | 0.20 min. |
| C5750 | 5.70 + 0.50/-0.40 | 5.00 ± 0.40       | 0.20 min. |
| C7563 | 7.50 ± 0.50       | 6.30 ± 0.50       | 0.30 min. |

\*Dimension tolerance are typical values

#### Temperature Characteristics

| Temperature Characteristics | Temperature Coefficient or Capacitance Change | Temperature Range |
|-----------------------------|-----------------------------------------------|-------------------|
| C0G                         | 0 ± 30ppm/°C                                  | -55 to +125°C     |
| X7R                         | ±15%                                          | -55 to +125°C     |
| X7S                         | ±22%                                          | -55 to +125°C     |
| X7T                         | +22/-33%                                      | -55 to +125°C     |

#### Rated Voltage (DC)

| Code | Voltage (DC) |
|------|--------------|
| 1C   | 16V          |
| 1E   | 25V          |
| 1V   | 35V          |
| 1H   | 50V          |
| 2A   | 100V         |
| 2E   | 250V         |
| 2W   | 450V         |
| 2J   | 630V         |
| 3A   | 1000V        |
| 3D   | 2000V        |
| 3F   | 3000V        |

#### Nominal Capacitance (pF)

The capacitance is expressed in three digit codes and in units of pico Farads (pF). The first and second digits identify the first and second significant figures of the capacitance. The third digit identifies the multiplier. R designates a decimal point. Ex. 0R2 = 0.2pF; 103 = 10,000pF; 105 = 1,000,000pF = 1,000nF

#### Capacitance Tolerance

| Code | Tolerance |
|------|-----------|
| K    | ± 10%     |
| M    | ± 20%     |

#### Nominal Thickness

| Code | Thickness |
|------|-----------|
| 080  | 0.80 mm   |
| 085  | 0.85 mm   |
| 115  | 1.15 mm   |
| 125  | 1.25 mm   |
| 130  | 1.30 mm   |
| 160  | 1.60 mm   |
| 200  | 2.00 mm   |
| 230  | 2.30 mm   |
| 250  | 2.50 mm   |
| 280  | 2.80 mm   |

#### Packaging Style

| Code | Style                    |
|------|--------------------------|
| A    | 178 mm Reel, 4 mm Pitch  |
| K    | 178 mm Reel, 8 mm Pitch  |
| L    | 330 mm Reel, 12 mm Pitch |

#### Special Reserved Code

| Code | Description      |
|------|------------------|
| E    | Soft Termination |





## Capacitance Range Chart

## EIA CC0603 [C1608]

### Capacitance Range Chart

Temperature Characteristics: X7R (±15%)  
Rated Voltage: 50V (1H)

| Capacitance (pF) | Code | Tolerance            | X7R<br>1H<br>(50V) |
|------------------|------|----------------------|--------------------|
| 1,000            | 102  | K: ± 10%<br>M: ± 20% |                    |
| 10,000           | 103  |                      |                    |
| 100,000          | 104  |                      |                    |
| 470,000          | 474  |                      |                    |

StandardThickness  
0.80 mm



## Capacitance Range Chart

## EIA CC0805 [C2012]

### Capacitance Range Chart

Temperature Characteristics: X7R (±15%), X7S (±22%), X7T (+22/-33%)  
Rated Voltage: 450V (2W), 250V (2E), 100V (2A), 50V (1H), 35V (1V), 25V (1E), 16V (1C)

| Capacitance (pF) | Code | Tolerance            | X7R          |              |             |             |             |             | X7S          | X7T          |              |
|------------------|------|----------------------|--------------|--------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
|                  |      |                      | 2E<br>(250V) | 2A<br>(100V) | 1H<br>(50V) | 1V<br>(35V) | 1E<br>(25V) | 1C<br>(16V) | 2A<br>(100V) | 2W<br>(450V) | 2E<br>(250V) |
| 10,000           | 103  | K: ± 10%<br>M: ± 20% |              |              |             |             |             |             |              |              |              |
| 22,000           | 223  |                      |              |              |             |             |             |             |              |              |              |
| 47,000           | 473  |                      |              |              |             |             |             |             |              |              |              |
| 100,000          | 104  |                      |              |              |             |             |             |             |              |              |              |
| 220,000          | 224  |                      |              |              |             |             |             |             |              |              |              |
| 470,000          | 474  |                      |              |              |             |             |             |             |              |              |              |
| 1,000,000        | 105  |                      |              |              |             |             |             |             |              |              |              |
| 2,200,000        | 225  |                      |              |              |             |             |             |             |              |              |              |
| 4,700,000        | 475  |                      |              |              |             |             |             |             |              |              |              |

StandardThickness  
0.85 mm  
1.25 mm



## Capacitance Range Chart

## EIA CC1206 [C3216]

### Capacitance Range Chart

Temperature Characteristics: X7R (±15%), X7S (±22%), X7T (+22/-33%)  
Rated Voltage: 630V (2J), 450V (2W), 250V (2E), 100V (2A), 50V (1H), 35V (1V), 25V (1E)

| Capacitance (pF) | Code | Tolerance            | X7R          |              |              |             |             |             | X7S          | X7T          |              |              |
|------------------|------|----------------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
|                  |      |                      | 2J<br>(630V) | 2E<br>(250V) | 2A<br>(100V) | 1H<br>(50V) | 1V<br>(35V) | 1E<br>(25V) | 2A<br>(100V) | 2J<br>(630V) | 2W<br>(450V) | 2E<br>(250V) |
| 470              | 471  | K: ± 10%<br>M: ± 20% |              |              |              |             |             |             |              |              |              |              |
| 1,000            | 102  |                      |              |              |              |             |             |             |              |              |              |              |
| 10,000           | 103  |                      |              |              |              |             |             |             |              |              |              |              |
| 22,000           | 223  |                      |              |              |              |             |             |             |              |              |              |              |
| 47,000           | 473  |                      |              |              |              |             |             |             |              |              |              |              |
| 100,000          | 104  |                      |              |              |              |             |             |             |              |              |              |              |
| 220,000          | 224  |                      |              |              |              |             |             |             |              |              |              |              |
| 470,000          | 474  |                      |              |              |              |             |             |             |              |              |              |              |
| 1,000,000        | 105  |                      |              |              |              |             |             |             |              |              |              |              |
| 2,200,000        | 225  |                      |              |              |              |             |             |             |              |              |              |              |
| 4,700,000        | 475  |                      |              |              |              |             |             |             |              |              |              |              |
| 10,000,000       | 106  |                      |              |              |              |             |             |             |              |              |              |              |

StandardThickness 0.85 mm 1.15 mm 1.30 mm 1.60 mm

TDK provides Soft Termination on the most commonly used MLCC sizes and capacitance values. Soft Termination offers an external electrode design that differs from the standard electrode design, and this design may be able to be applied to capacitance values beyond those listed in the catalog. Please contact TDK if your specific product needs are not listed and we will consider adding it to the product offering.





## Capacitance Range Chart

## EIA CC1210[C3225]

### Capacitance Range Chart

Temperature Characteristics: X7R ( $\pm 15\%$ ), X7S ( $\pm 22\%$ ), X7T ( $+22/-33\%$ )

Rated Voltage: 630V (2J), 450V (2W), 250V (2E), 100V (2A), 50V (1H)

| Capacitance (pF) | Code | Tolerance                      | X7R       |           |           | X7S       |          | X7T       |           |
|------------------|------|--------------------------------|-----------|-----------|-----------|-----------|----------|-----------|-----------|
|                  |      |                                | 2J (630V) | 2E (250V) | 2A (100V) | 2A (100V) | 1H (50V) | 2J (630V) | 2W (450V) |
| 47,000           | 473  | K: $\pm 10\%$<br>M: $\pm 20\%$ |           |           |           |           |          |           |           |
| 100,000          | 104  |                                |           |           |           |           |          |           |           |
| 220,000          | 224  |                                |           |           |           |           |          |           |           |
| 2,200,000        | 225  |                                |           |           |           |           |          |           |           |
| 4,700,000        | 475  |                                |           |           |           |           |          |           |           |
| 10,000,000       | 106  |                                |           |           |           |           |          |           |           |

Standard Thickness

|  |         |
|--|---------|
|  | 1.60 mm |
|  | 2.00 mm |
|  | 2.30 mm |
|  | 2.50 mm |



## Capacitance Range Chart

## EIA CC1808 [C4520]

### Capacitance Range Chart

Temperature Characteristics : X7R ( $\pm 15\%$ )

Rated Voltage: 2000V (3D)

| Capacitance (pF) | Code | Tolerance                      | X7R        |
|------------------|------|--------------------------------|------------|
|                  |      |                                | 3D (2000V) |
| 1,000            | 102  | K: $\pm 10\%$<br>M: $\pm 20\%$ |            |

Standard Thickness

|  |         |
|--|---------|
|  | 1.30 mm |
|--|---------|



## Capacitance Range Chart

## EIA CC1812 [C4532]

### Capacitance Range Chart

Temperature Characteristics : C0G ( $0 \pm 30\text{ppm}/^\circ\text{C}$ ), X7R ( $\pm 15\%$ ), X7T ( $+22/-33\%$ )

Rated Voltage: 3000V (3F), 2000V (3D), 630V (2J), 450V (2W), 250V (2E)

| Capacitance (pF) | Code | Tolerance                      | C0G        | X7R        |           | X7T       |           |           |
|------------------|------|--------------------------------|------------|------------|-----------|-----------|-----------|-----------|
|                  |      |                                | 3F (3000V) | 3D (2000V) | 2E (250V) | 2J (630V) | 2W (450V) | 2E (250V) |
|                  |      | K: $\pm 10\%$<br>M: $\pm 20\%$ |            |            |           |           |           |           |
|                  |      |                                |            |            |           |           |           |           |
|                  |      |                                |            |            |           |           |           |           |
|                  |      |                                |            |            |           |           |           |           |
|                  |      |                                |            |            |           |           |           |           |
|                  |      |                                |            |            |           |           |           |           |

Standard Thickness

|  |         |
|--|---------|
|  | 1.30 mm |
|  | 2.00 mm |
|  | 2.30 mm |
|  | 2.50 mm |

TDK provides Soft Termination on the most commonly used MLCC sizes and capacitance values. Soft Termination offers an external electrode design that differs from the standard electrode design, and this design may be able to be applied to capacitance values beyond those listed in the catalog. Please contact TDK if your specific product needs are not listed and we will consider adding it to the product offering.





## Capacitance Range Chart

## EIA CC2220 [C5750]

### Capacitance Range Chart

Temperature Characteristics : X7R ( $\pm 15\%$ ), X7S ( $\pm 22\%$ ), X7T ( $+22/-33\%$ )

Rated Voltage: 630V (2J), 450V (2W), 250V (2E), 100V (2A)

| Capacitance (pF) | Code | Tolerance     | X7R       | X7S       | X7T       |           |           |
|------------------|------|---------------|-----------|-----------|-----------|-----------|-----------|
|                  |      |               | 2E (250V) | 2A (100V) | 2J (630V) | 2W (450V) | 2E (250V) |
| 10,000           | 103  | K: $\pm 10\%$ |           |           |           |           |           |
| 470,000          | 474  | M: $\pm 20\%$ |           |           |           |           |           |
| 1,000,000        | 105  |               |           |           |           |           |           |
| 2,200,000        | 225  |               |           |           |           |           |           |
| 10,000,000       | 106  |               |           |           |           |           |           |

Standard Thickness

2.30 mm

2.50 mm



## Capacitance Range Chart

## EIA CC3025 [C7563]

### Capacitance Range Chart

Temperature Characteristics : X7S ( $\pm 22\%$ )

Rated Voltage: 50V (1H), 16V (1C)

| Capacitance (pF) | Code | Tolerance     | X7S      |          |
|------------------|------|---------------|----------|----------|
|                  |      |               | 1H (50V) | 1C (16V) |
| 22,000,000       | 226  | M: $\pm 20\%$ |          |          |
| 100,000,000      | 107  |               |          |          |

Standard Thickness

2.30 mm

2.80 mm

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## Capacitance Range Table

### Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to +125°C, 0 ± 30 ppm/°C)

| Capacitance | Size | Thickness (mm) | Capacitance Tolerance | Catalog Number           |
|-------------|------|----------------|-----------------------|--------------------------|
|             |      |                |                       | Rated Voltage Edc: 3000V |
| 330 pF      | 4532 | 2.50 ± 0.20    | ± 10%                 | C4532C0G3F331K250KE      |

### Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%)

| Capacitance | Size | Thickness (mm)   | Capacitance Tolerance | Catalog Number           |                         |                         |                         |                        |
|-------------|------|------------------|-----------------------|--------------------------|-------------------------|-------------------------|-------------------------|------------------------|
|             |      |                  |                       | Rated Voltage Edc: 2000V | Rated Voltage Edc: 630V | Rated Voltage Edc: 250V | Rated Voltage Edc: 100V | Rated Voltage Edc: 50V |
| 1 nF        | 1608 | 0.80 +0.15/-0.1  | ± 10%                 |                          |                         |                         |                         | C1608X7R1H102K080AE    |
|             |      |                  | ± 20%                 |                          |                         |                         |                         | C1608X7R1H102M080AE    |
|             | 4520 | 1.30 ± 0.15      | ± 10%                 | C4520X7R3D102K130KE      |                         |                         |                         |                        |
|             |      |                  | ± 20%                 | C4520X7R3D102M130KE      |                         |                         |                         |                        |
| 2.2 nF      | 4532 | 1.30 ± 0.15      | ± 10%                 | C4532X7R3D222K130KE      |                         |                         |                         |                        |
|             |      |                  | ± 20%                 | C4532X7R3D222M130KE      |                         |                         |                         |                        |
| 10 nF       | 1608 | 0.80 +0.15/-0.1  | ± 10%                 |                          |                         |                         |                         | C1608X7R1H103K080AE    |
|             |      |                  | ± 20%                 |                          |                         |                         |                         | C1608X7R1H103M080AE    |
|             | 2012 | 1.25 +0.25/-0.20 | ± 10%                 |                          |                         | C2012X7R2E103K125AE     |                         |                        |
|             |      |                  | ± 20%                 |                          |                         | C2012X7R2E103M125AE     |                         |                        |
| 22 nF       | 3216 | 1.15 ± 0.15      | ± 10%                 |                          | C3216X7R2J103K115AE     |                         |                         |                        |
|             |      |                  | ± 20%                 |                          | C3216X7R2J103M115AE     |                         |                         |                        |
|             | 2012 | 1.25 +0.25/-0.20 | ± 10%                 |                          |                         | C2012X7R2E223K125AE     |                         |                        |
|             |      |                  | ± 20%                 |                          |                         | C2012X7R2E223M125AE     |                         |                        |
| 47 nF       | 3216 | 1.30 ± 0.20      | ± 10%                 |                          | C3216X7R2J223K130AE     |                         |                         |                        |
|             |      |                  | ± 20%                 |                          | C3216X7R2J223M130AE     |                         |                         |                        |
|             | 3225 | 2.00 +0.30/-0.20 | ± 10%                 |                          | C3225X7R2J473K200AE     |                         |                         |                        |
|             |      |                  | ± 20%                 |                          | C3225X7R2J473M200AE     |                         |                         |                        |
| 100 nF      | 1608 | 0.80 +0.15/-0.1  | ± 10%                 |                          |                         |                         |                         | C1608X7R1H104K080AE    |
|             |      |                  | ± 20%                 |                          |                         |                         |                         | C1608X7R1H104M080AE    |
|             | 2012 | 1.25 +0.25/-0.20 | ± 10%                 |                          |                         | C2012X7R2A104K125AE     | C2012X7R1H104K125AE     |                        |
|             |      |                  | ± 20%                 |                          |                         | C2012X7R2A104M125AE     | C2012X7R1H104M125AE     |                        |
| 220 nF      | 3216 | 1.60 +0.30/-0.20 | ± 10%                 |                          | C3216X7R2E104K160AE     | C3216X7R2A104K160AE     |                         |                        |
|             |      |                  | ± 20%                 |                          | C3216X7R2E104M160AE     | C3216X7R2A104M160AE     |                         |                        |
|             | 3225 | 2.00 +0.30/-0.20 | ± 10%                 |                          | C3225X7R2E104K200AE     |                         |                         |                        |
|             |      |                  | ± 20%                 |                          | C3225X7R2E104M200AE     |                         |                         |                        |
| 470 nF      | 1608 | 0.80 +0.15/-0.1  | ± 10%                 |                          |                         |                         |                         | C1608X7R1H474K080AE    |
|             |      |                  | ± 20%                 |                          |                         |                         |                         | C1608X7R1H474M080AE    |
|             | 2012 | 1.25 +0.25/-0.20 | ± 10%                 |                          |                         |                         |                         | C2012X7R1H474K125AE    |
|             |      |                  | ± 20%                 |                          |                         |                         |                         | C2012X7R1H474M125AE    |
| 1 µF        | 3216 | 1.60 +0.30/-0.20 | ± 10%                 |                          |                         | C3216X7R2A474K160AE     |                         |                        |
|             |      |                  | ± 20%                 |                          |                         | C3216X7R2A474M160AE     |                         |                        |
|             | 4532 | 2.30 +0.30/-0.20 | ± 10%                 |                          | C4532X7R2E474K230KE     |                         |                         |                        |
|             |      |                  | ± 20%                 |                          | C4532X7R2E474M230KE     |                         |                         |                        |
| 2.2 µF      | 2012 | 1.25 +0.25/-0.20 | ± 10%                 |                          |                         |                         |                         | C2012X7R1H105K125AE    |
|             |      |                  | ± 20%                 |                          |                         |                         |                         | C2012X7R1H105M125AE    |
|             | 3216 | 1.60 +0.30/-0.20 | ± 10%                 |                          |                         | C3216X7R2A105K160AE     | C3216X7R1H105K160AE     |                        |
|             |      |                  | ± 20%                 |                          |                         | C3216X7R2A105M160AE     | C3216X7R1H105M160AE     |                        |
| 4.7 µF      | 5750 | 2.30 +0.30/-0.20 | ± 10%                 |                          | C5750X7R2E105K230KE     |                         |                         |                        |
|             |      |                  | ± 20%                 |                          | C5750X7R2E105M230KE     |                         |                         |                        |
|             | 2012 | 1.25 +0.25/-0.20 | ± 10%                 |                          |                         |                         |                         | C2012X7R1H225K125AE    |
|             |      |                  | ± 20%                 |                          |                         |                         |                         | C2012X7R1H225M125AE    |
| 2.2 µF      | 3216 | 1.60 +0.30/-0.20 | ± 10%                 |                          |                         |                         |                         | C3216X7R1H225K160AE    |
|             |      |                  | ± 20%                 |                          |                         |                         |                         | C3216X7R1H225M160AE    |
|             | 3225 | 2.30 +0.30/-0.20 | ± 10%                 |                          |                         | C3225X7R2A225K230AE     |                         |                        |
|             |      |                  | ± 20%                 |                          |                         | C3225X7R2A225M230AE     |                         |                        |
| 4.7 µF      | 3216 | 1.60 +0.30/-0.20 | ± 10%                 |                          |                         |                         |                         | C3216X7R1H475K160AE    |
|             |      |                  | ± 20%                 |                          |                         |                         |                         | C3216X7R1H475M160AE    |





## Capacitance Range Table

### Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%)

| Capacitance | Size | Thickness (mm)   | Capacitance Tolerance | Catalog Number         |                        |                        |
|-------------|------|------------------|-----------------------|------------------------|------------------------|------------------------|
|             |      |                  |                       | Rated Voltage Edc: 35V | Rated Voltage Edc: 25V | Rated Voltage Edc: 16V |
| 2.2 µF      | 2012 | 1.25 +0.25/-0.20 | ± 10%                 | C2012X7R1V225K125AE    |                        |                        |
|             |      |                  | ± 20%                 | C2012X7R1V225M125AE    |                        |                        |
| 4.7 µF      | 2012 | 1.25 +0.25/-0.20 | ± 10%                 | C2012X7R1V475K125AE    | C2012X7R1E475K125AE    | C2012X7R1C475K125AE    |
|             |      |                  | ± 20%                 | C2012X7R1V475M125AE    | C2012X7R1E475M125AE    | C2012X7R1C475M125AE    |
|             | 3216 | 1.60 +0.30/-0.20 | ± 10%                 | C3216X7R1V475K160AE    |                        |                        |
|             |      |                  | ± 20%                 | C3216X7R1V475M160AE    |                        |                        |
| 10 µF       | 3216 | 1.60 +0.30/-0.20 | ± 10%                 | C3216X7R1V106K160AE    | C3216X7R1E106K160AE    |                        |
|             |      |                  | ± 20%                 | C3216X7R1V106M160AE    | C3216X7R1E106M160AE    |                        |

### Class 2 (Temperature Stable)

Temperature Characteristics: X7S (-55 to +125°C, ±22%)

| Capacitance | Size | Thickness (mm)   | Capacitance Tolerance | Catalog Number          |                        |                        |
|-------------|------|------------------|-----------------------|-------------------------|------------------------|------------------------|
|             |      |                  |                       | Rated Voltage Edc: 100V | Rated Voltage Edc: 50V | Rated Voltage Edc: 16V |
| 220 nF      | 2012 | 0.85 ± 0.15      | ± 10%                 | C2012X7S2A224K085AE     |                        |                        |
|             |      |                  | ± 20%                 | C2012X7S2A224M085AE     |                        |                        |
| 470 nF      | 2012 | 1.25 +0.25/-0.20 | ± 10%                 | C2012X7S2A474K125AE     |                        |                        |
|             |      |                  | ± 20%                 | C2012X7S2A474M125AE     |                        |                        |
| 1 µF        | 2012 | 1.25 +0.25/-0.20 | ± 10%                 | C2012X7S2A105K125AE     |                        |                        |
|             |      |                  | ± 20%                 | C2012X7S2A105M125AE     |                        |                        |
| 2.2 µF      | 3216 | 1.60 +0.30/-0.20 | ± 10%                 | C3216X7S2A225K160AE     |                        |                        |
|             |      |                  | ± 20%                 | C3216X7S2A225M160AE     |                        |                        |
| 4.7 µF      | 3225 | 2.00 +0.30/-0.20 | ± 10%                 | C3225X7S2A475K200AE     |                        |                        |
|             |      |                  | ± 20%                 | C3225X7S2A475M200AE     |                        |                        |
|             |      | 2.30 +0.30/-0.20 | ± 10%                 |                         | C3225X7S1H475K230AE    |                        |
|             |      |                  | ± 20%                 |                         | C3225X7S1H475M230AE    |                        |
| 10 µF       | 3225 | 2.50 ± 0.30      | ± 10%                 |                         | C3225X7S1H106K250AE    |                        |
|             |      |                  | ± 20%                 |                         | C3225X7S1H106M250AE    |                        |
|             | 5750 | 2.30 +0.30/-0.20 | ± 10%                 | C5750X7S2A106K230KE     |                        |                        |
|             |      |                  | ± 20%                 | C5750X7S2A106M230KE     |                        |                        |
| 22 µF       | 7563 | 2.30 (2.50max)   | ± 20%                 |                         | C7563X7S1H226M230LE    |                        |
| 100 µF      | 7563 | 2.80 (3.00max)   | ± 20%                 |                         |                        | C7563X7S1C107M280LE    |

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## Capacitance Range Table

### Class 2 (Temperature Stable)

Temperature Characteristics: X7T (-55 to +125°C, +22/-33%)

| Capacitance | Size | Thickness (mm)   | Capacitance Tolerance | Catalog Number          |                         |                         |
|-------------|------|------------------|-----------------------|-------------------------|-------------------------|-------------------------|
|             |      |                  |                       | Rated Voltage Edc: 630V | Rated Voltage Edc: 450V | Rated Voltage Edc: 250V |
| 10 nF       | 2012 | 0.85 ± 0.15      | ± 10%                 |                         | C2012X7T2W103K085AE     |                         |
|             |      |                  | ± 20%                 |                         | C2012X7T2W103M085AE     |                         |
| 22 nF       | 2012 | 1.25 +0.25/-0.20 | ± 10%                 |                         | C2012X7T2W223K125AE     |                         |
|             |      |                  | ± 20%                 |                         | C2012X7T2W223M125AE     |                         |
| 47 nF       | 2012 | 1.25 +0.25/-0.20 | ± 10%                 |                         | C2012X7T2W473K125AE     | C2012X7T2E473K125AE     |
|             |      |                  | ± 20%                 |                         | C2012X7T2W473M125AE     | C2012X7T2E473M125AE     |
|             | 3216 | 1.60 +0.30/-0.20 | ± 10%                 | C3216X7T2J473K160AE     |                         |                         |
|             |      |                  | ± 20%                 | C3216X7T2J473M160AE     |                         |                         |
| 100 nF      | 2012 | 1.25 +0.25/-0.20 | ± 10%                 |                         |                         | C2012X7T2E104K125AE     |
|             |      |                  | ± 20%                 |                         |                         | C2012X7T2E104M125AE     |
|             | 3216 | 1.60 +0.30/-0.20 | ± 10%                 |                         | C3216X7T2W104K160AE     |                         |
|             |      |                  | ± 20%                 |                         | C3216X7T2W104M160AE     |                         |
|             | 3225 | 1.60 +0.30/-0.20 | ± 10%                 | C3225X7T2J104K160AE     |                         |                         |
|             |      |                  | ± 20%                 | C3225X7T2J104M160AE     |                         |                         |
| 220 nF      | 3216 | 1.60 +0.30/-0.20 | ± 10%                 |                         |                         | C3216X7T2E224K160AE     |
|             |      |                  | ± 20%                 |                         |                         | C3216X7T2E224M160AE     |
|             | 3225 | 2.00 +0.30/-0.20 | ± 10%                 |                         | C3225X7T2W224K200AE     |                         |
|             |      |                  | ± 20%                 |                         | C3225X7T2W224M200AE     |                         |
|             | 4532 | 2.00 +0.30/-0.20 | ± 10%                 | C4532X7T2J224K200KE     |                         |                         |
|             |      |                  | ± 20%                 | C4532X7T2J224M200KE     |                         |                         |
| 470 nF      | 4532 | 2.30 +0.30/-0.20 | ± 10%                 |                         | C4532X7T2W474K230KE     |                         |
|             |      |                  | ± 20%                 |                         | C4532X7T2W474M230KE     |                         |
|             | 5750 | 2.50 ± 0.30      | ± 10%                 | C5750X7T2J474K250KE     |                         |                         |
|             |      |                  | ± 20%                 | C5750X7T2J474M250KE     |                         |                         |
| 1 µF        | 4532 | 2.50 ± 0.30      | ± 10%                 |                         |                         | C4532X7T2E105K250KE     |
|             |      |                  | ± 20%                 |                         |                         | C4532X7T2E105M250KE     |
|             | 5750 | 2.50 ± 0.30      | ± 10%                 |                         | C5750X7T2W105K250KE     |                         |
|             |      |                  | ± 20%                 |                         | C5750X7T2W105M250KE     |                         |
| 2.2 µF      | 5750 | 2.50 ± 0.30      | ± 10%                 |                         |                         | C5750X7T2E225K250KE     |
|             |      |                  | ± 20%                 |                         |                         | C5750X7T2E225M250KE     |

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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
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- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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